

GenCore version 5.1.4_p5_4578
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OM protein - protein search, using sw model

Run on: April 27, 2003, 08:52:11 ; Search time 28 Seconds
(without alignments)
710.708 Million cell updates/sec

Title: US-09-836-960-5
Perfect score: 1097
Sequence: 1 MYSAPSACTCLCLHLLCF.....PFKYTTVTKRRIRPHTPA 207

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR_73:.*
1: pir1:.*
2: pir2:.*
3: pir3:.*
4: pir4:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	591	53.9	215	2 G02092	fibroblast growth
2	591	53.9	215	2 A46245	fibroblast growth
3	566	51.6	216	2 JC5972	fibroblast growth
4	194	17.7	194	1 A36301	fibroblast growth
5	193	17.6	194	2 S49501	keratinocyte growth
6	193	17.6	194	2 I48610	keratinocyte growth
7	190	17.3	194	2 S26049	fibroblast growth
8	190	17.3	413	2 H88481	protein let-756 [i
9	181	16.5	208	2 JC7082	fibroblast somatot
10	172	15.7	194	2 I50710	fibroblast growth
11	172	15.7	208	2 S66486	fibroblast growth
12	172	15.7	208	2 A48137	fibroblast growth
13	171.5	15.6	155	2 S04147	acidic fibroblast
14	171.5	15.6	155	2 D37360	acidic fibroblast
15	170.5	15.5	206	1 TVRHUS	fibroblast growth
16	169.5	15.5	155	1 A60721	acidic fibroblast
17	168.5	15.4	152	2 JH0476	acidic fibroblast
18	167.5	15.3	155	2 JW0055	acidic fibroblast
19	167.5	15.3	192	2 S54407	embryonic fibrobla
20	166.5	15.2	155	1 A33665	acidic fibroblast
21	164	14.9	211	1 JC7353	fibroblast growth
22	164	14.9	212	2 JC7511	fibroblast growth
23	163.5	14.9	97	2 B46289	keratinocyte growth
24	159.5	14.5	155	1 GKBOA	acidic fibroblast
25	159.5	14.5	189	2 A48834	basic fibroblast g
26	159.5	14.5	207	2 JC5940	fibroblast growth
27	159	14.5	187	2 S23595	embryonic fibrobla
28	157.5	14.4	146	1 S00185	basic fibroblast g
29	157.5	14.4	157	1 GKBOB	basic fibroblast g

ALIGNMENTS

RESULT 1

G02092

fibroblast growth factor 8 precursor - human

N:Alternate names: androgen-induced growth factor

N:Contains: fibroblast growth factor 8, splice form A

C:Species: Homo sapiens (man)

C:Date: 21-Dec-1996 #sequence.revision 06-Jun-1997 #text_change 31-Mar-2000

C:Accession: G02092; S65653; G02394.

R:Chiu, I.

submitted to the EMBL Data Library, September 1995

A:Reference number: H00790

A:Accession: G02092

A:Status: translated from GB/EMBL/DBDJ

A:Molecule type: mRNA

A:Residues: 1-215 <CHI>

A:Cross-references: EMBL:U36223; NID:g1143261; PID:g1143262

R:Tanaka, A.; Miyamoto, K.; Matsuo, H.; Matsumoto, K.; Yoshida, H.

FEBS Lett. 363, 226-230, 1995

A:Title: Human androgen-induced growth factor in prostate and breast cancer cells: 1.

A:Reference number: S65653; MUID:95255551; PMID:7737407

A:Accession: S65653

A:Status: preliminary

A:Molecule type: DNA; mRNA

A:Residues: 1-215 <TAN>

A:Cross-references: EMBL:S78465; EMBL:S78466; NID:g999171; PID:g999172; GB:D38752; N

R:Roy-Burman, P.

submitted to the EMBL Data Library, January 1996

A:Reference number: H01168

A:Accession: G02394

A:Status: translated from GB/EMBL/DBDJ

A:Molecule type: mRNA

A:Residues: 1-23.35-215 <ROY>

A:Cross-references: EMBL:U46211; NID:g1184864; PID:g1184865

C:Genetics:

A:Gene: GDB:FGF8; AIGF

A:Cross-references: GDB:591889; OMIM:600483

A:Map position: 10q25-10q26

C:Keywords: alternative splicing; blocked amino end; pyroglutamic acid

F:1-22/Domain: signal sequence #status predicted <Sig>

F:23-215/Product: fibroblast growth factor 8 #status predicted <MAT>

F:23,35-215/Product: fibroblast growth factor 8, splice form A #status predicted <MAV>

F:23/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predi

Query Match 53.9%; Score 591; DB 2; Length 215;

Best Local Similarity 57.3%; Pred. No. 6.3e-45;

Matches 110; Conservative 35; Mismatches 45; Indels 2; Gaps 2;

QY 1 MYSAPSACTCLCLHLLCFQVQVVAEENVDRIHVENOTRARDVSRKOLRYOLYSR 60

Db 1 MGSPRSALSCULLHLLCLQAVTV-QSSPNFTQHVREQLVDQLSRRIRFYQLYSR 59

QY 61 TSGRHIQVL-GRRISARGEDGKYAQLLVETDTFGSQVRIKGETEFYLCMNRKGLVGK 119

```
Db 60 TSGRHVQVLANKRINAMAEODGPPAKLIVETDTFGSRVRVRGAETGLYICMNNKKGKLIK 119
Qy 120 PDGTSKCEVTEKLENNYNTALMSAKYSGWYVGFTHKGRPRKPGKPTRENOQDVHFMKRYK 179
Db 120 SNGKGDVTEIVLENNYNTALQNAKYEGWYMAFTKGRPRKPGKSKTROHOREVHFMRKRLP 179
Qy 180 KGPELOKRPKY 191
Db 180 RGHHTTEQSLRF 191

RESULT 2
A6245
fibroblast growth factor 8 - mouse
N:Alternate names: androgen-induced growth factor
C:Species: Mus musculus (house mouse)
C:Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 17-Mar-2000
C:Accession: A6245; I49194; S53114
R:Tanaka, A.; Miyamoto, K.; Minamino, N.; Takeda, M.; Sato, B.; Matsuo, H.; Matsumoto, K
Proc. Natl. Acad. Sci. U.S.A. 89, 8928-8932, 1992
A:Title: Cloning and characterization of an androgen-induced growth factor essential for
A:Reference number: A6245; MUID:93028380; PMID:1409588
A:Accession: A6245
A>Status: preliminary
A:Molecule type: mRNA; protein
A:Residues: 1-215 <PAN>
A:Cross-references: GB:D12482; NID:g220324; PIDN:BAA02050.1; PID:d1002532; PID:g220325
A:Experimental source: mammary carcinoma, clone pSC17
A>Note: Sequence extracted from NCBI backbone (NCBIN:115358, NCBIP:115360)
R:MacArthur, C.A.; Shankar, D.B.; Shackelford, G.M.
J. Virol. 69, 2501-2507, 1995
A:Title: Fgf-8, activated by proviral insertion, cooperates with the Wnt-1 transgene in
A:Reference number: I49194; MUID:95191029; PMID:7884899
A:Accession: I49194
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-23,35-215 <RES>
A:Cross-references: EMBL:U18673; NID:g619919; PIDN:AAA65387.1; PID:g619920
R:Mahmood, R.; Bresnick, J.; Hornbruch, A.; Mahony, C.; Morton, N.; Colquhoun, K.; Marti
submitted to the EMBL Data Library, March 1995
A:Description: FGF-8 in the mouse embryo: a role in the initiation and maintenance of li
A:Reference number: S53114
A:Accession: S53114
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-23,35-215 <MAH>
A:Cross-references: EMBL:248746; NID:g732820; PIDN:CAA88637.1; PID:g732821
C:Genetics:
A:Gene: Fgf-8
C:Keywords: alternative splicing

Query Match 53.9%; Score 591; DB 2; Length 215;
Best Local Similarity 57.3%; Pred. No. 6,3e-45;
Matches 110; Conservative 35; Mismatches 45; Indels 2; Gaps 2;

Qy 1 MTSAPSACTCLCHFLLLCFQVQVLVAEENVDFRIHVENQTRADDVSRKQLRLYQLXSR 60
Db 1 MGSPRSALELLHLVLCLQAQVTV-QSSPNFTQHVREQSLVTDQLSRRLTQLYSR 59

Qy 61 TSGKHTOVL-GRRI-SARGEDGKYAQLLVETDTFGSQVRKGEKTEFYLCMNRKGLVGPDTGSKBC 119
Db 60 TSGKHQVQVLANKRINAMAEODGPPAKLIVETDTFGSRVRVRGAETGLYICMNNKKGKLIK 119

Qy 120 PDGTSKCEVTEKLENNYNTALMSAKYSGWYVGFTHKGRPRKPGKPTRENOQDVHFMKRYK 179
Db 120 SNGKGDVTEIVLENNYNTALQNAKYEGWYMAFTKGRPRKPGKSKTROHOREVHFMRKRLP 179

Qy 180 KGPELOKRPKY 191
Db 180 RGHHTTEQSLRF 191
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RESULT 3
JC5972
fibroblast growth factor-17 - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 16-Jul-1999
C:Accession: JC5972
R:Hoshikawa, M.; Ohbayashi, N.; Yonamine, A.; Konishi, M.; Ozaki, K.; Fukui, S.; Itoh
Biochem. Biophys. Res. Commun. 244, 187-191, 1998
A:Title: Structure and expression of a novel fibroblast growth factor,FGF-17,preferen
A:Reference number: JC5972; MUID:98183421; PMID:9514906
A:Accession: JC5972
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-216 <HOS>
A:Cross-references: GB:AB009250

Query Match 51.6%; Score 566; DB 2; Length 216;
Best Local Similarity 54.4%; Pred. No. 1e-42;
Matches 111; Conservative 37; Mismatches 38; Indels 18; Gaps 4;

Qy 11 LCLHFLLLCFQVQVLVAEEN---VDFRIHVENQTRADDVSRKQLRLYQLYSLRTSGKHQ 67
Db 12 LCLQLLLCCQQTQ----GENHSPNFQNVROGAMTDQLSRRIQIREYQLYSLRTSGKHQ 67

Qy 68 VLGRIRISARGEDGKYAQLLVETDTFGSQVRKGEKTEFYLCMNRKGLVGPDTGSKBC 127
Db 68 VTGRRISATAEDGNKFAKLIVETDTFGSRVRKGAESEKYLICMNRKGLIGRPSGSKDC 127

Qy 128 VFIKVLNNYNTALMSAKYSGWYVGFTHKGRPRKPGKPTRENOQDVHFMKRYPKGQ----- 182
Db 128 VFTEIVLENNYNTAFQNAHGEHGFMAFTQGRPRQASRSRQNGREAHFIRKLYQGQLPFPN 187

Qy 183 -PELOKPFKY-----TTVTKRSR 200
Db 188 HAERKQKQFEVGSAPTRTKRTRR 211

RESULT 4
A36301
fibroblast growth factor 7 precursor [validated] - human
N:Alternate names: keratinocyte growth factor
C:Species: Homo sapiens (man)
C:Date: 28-Mar-1991 #sequence_revision 07-Jul-1995 #text_change 08-Dec-2000
C:Accession: A36301; A31453; A46289; I51958
R:Finch, P.W.; Rubin, J.S.; Miki, T.; Ron, D.; Aaronson, S.A.
Science 245, 752-755, 1989
A:Title: Human KGF is FGF-related with properties of a paracrine effector of epitheli
A:Reference number: A36301; MUID:89368897; PMID:2475908
A:Accession: A36301
A:Molecule type: mRNA
A:Residues: 1-194 <FIN>
A:Cross-references: GB:M60828; NID:g186738; PIDN:AAA63210.1; PID:g186739; GB:M25295
R:Rubin, J.S.; Osada, H.; Finch, P.W.; Taylor, W.G.; Rudikoff, S.; Aaronson, S.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 802-806, 1989
A:Title: Purification and characterization of a newly identified growth factor specif
A:Reference number: A31453; MUID:89128865; PMID:2915979
A:Accession: A31453
A:Molecule type: protein
A:Residues: 'Y', 33-44 <RUB>
A:Experimental source: embryonic lung cell fibroblast line M426
R:Kelley, M.J.; Pech, M.; Seunanez, H.N.; Rubin, J.S.; O'Brien, S.J.; Aaronson, S.A.
Proc. Natl. Acad. Sci. U.S.A. 89, 9287-9291, 1992
A:Title: Emergence of the keratinocyte growth factor multigene family during the grea
A:Reference number: A46289; MUID:93028449; PMID:1409637
A:Accession: A46289
A:Molecule type: DNA
A:Residues: 97-194 <REL>
A>Note: sequence extracted from NCBI backbone (NCBIN:115887, NCBIP:115889)
R:Aaronson, S.A.; Bottaro, D.P.; Miki, T.; Ron, D.; Finch, P.W.; Fleming, T.P.; Ahn,
Ann. N. Y. Acad. Sci. 638, 62-77, 1991
A:Title: Keratinocyte growth factor. A fibroblast growth factor family member with un
A:Reference number: I51958; MUID:92152720; PMID:1664700
A:Accession: I51958
```

	Query Match	17.6%	Score 193;	DB 2;	Length 194;
	Best Local Similarity	35.8%	Pred. No. 8.7e-10;		
	Matches 53;	Conservative 26;	Mismatches 51;	Indels 18;	Gaps 6;
QY	38	ENQTRARDVSRKQRLRYLYSRTSGKHIOVLGRRLISARG-----EDGDKYAQLLYETD	91		
		: : :			
Db	50	ERHRSYDYMEGGDIVRRLFCRTQWY-----LRDDKGVKGTQEMKSNYIMERTV	103		
QY	92	TFGSOVRTKGTETFLVCNNRKGVLGKPDGTSKECVFTEKVLNNYTALMSAK--YSG-	148		
		: :			
Db	104	AVGI-VALKGVSEYLLAWNKGGKYAKKE-CNEDCNFKLEILLENHNTYTSARAKWTHSGG	161		
QY	149	-WYVGFTKKGRPRKGPKTRENQDVFHM	175		
		:			
Db	162	EMFVALNQGIPIVGKKTKEQKTAHFL	189		

```

RESULT 7
S26049
fibroblast growth factor 7 precursor - rat
N:Alternate names: keratinocyte growth factor
C:Species: Rattus norvegicus (Norway rat)
C:Date: 19-Mar-1998 #sequence_revision 19-Mar-1998 #text_change 16-Jul-1999
C:Accession: S26049; S78446
R:Yan, G.; Nikolaropoulos, S.; Wang, F.; McKeehan, W.L.
In Vitro Cell. Dev. Biol. 27, 437-438, 1991
A:Title: Sequence of rat keratinocyte growth factor (heparin-binding growth factor
A:Reference number: S26049
A:Accession: S26049
A:Molecule type: mRNA
A:Residues: 1-194 <YAN>
A:Cross-references: EMBL:X56551
R:Yan, G.
submitted to the EMBL Data Library, February 1991

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A:Reference number: S78446
A:Accession: S78446
A:Molecule type: mRNA
A:Residues: 1-16,'P','18-100','M','102-123','Q','125-150','S','152-194 <YAW>
A:Cross-references: EMBL:X56551; NID:q56707; PIDN:CAA39892.1; PID:q56708
C:Superfamily: fibroblast growth factor
C:Superfamily: extracellular protein; growth factor; heparin binding; mitogen
E:1-31/Domain: signal sequence #status predicted <Sig>
F:32-194/Product: fibroblast growth factor 7 #status predicted <MAT>
Query Match 17.3%; Score 190; DB 2; Length 194;
Best Local Similarity 35.1%; Pred. No. 1.6e-09;
Matches 52; Conservative 27; Mismatches 51; Indels 18; Gaps 6;

Qy	149	-WYVGFTKKGRPRKGPKTRENOQDVHEM	175
	:	: : : : :	:
Dδ	162	EMFVALNOKGLPVKGKTKKEQKTAHFL	189

Db 61 LRRQLYCRT-GRHLEIFPNNGTIOGTRKDHRSRGILEFISIAVG-LVSIKGVDSGLYLGM 118
QY 111 NRKGLVKGPDGTSKSCVFTEKVLNNYALMSAKYS-----GWYVGFKKGRPRKGP 164
Db 119 NEKGELYS-EKLTQECVFEQEEWNYTSSNLKHKVDTGRRYYVALNKDGTTPRGTR 177
QY 165 TRNQDQVHPMKR--YPKGOPELQK 187
Db 178 TKRHQKFTFLPRPDPDKVPPELYK 202

RESULT 12

A48137
fibroblast growth factor 9 - human
N:Alternate names: glia-activating factor
C:Species: Homo sapiens (man)
C:Date: 21-Jan-1994 #sequence_revision 18-Nov-1994 #text_change 21-Jul-2000
C:Accession: A48137
R: Miyamoto, M.; Naruo, K.; Seko, C.; Matsumoto, S.; Kondo, T.; Kurokawa, T.
Mol. Cell. Biol. 13, 4251-4259, 1993
A:Title: Molecular cloning of a novel cytokine cDNA encoding the ninth member of the fibroblast growth factor family
A:Reference number: A48137; MUID:93309459; PMID:8321227
A:Accession: A48137
A:Status: preliminary
A:Molecule type: nucleic acid
A:Residues: 1-208 <MIY>
A:Cross-references: GDB:D14838; NID:g391718; PIDN:BAA03572.1; PID:g391719
A:Experimental source: foreskin
A:Note: sequence extracted from NCBI backbone (NCBIN:134640, NCBI:P134641)
C:Genetics:
A:Gene: GDB:RGF9
A:Cross-references: GDB:207221; OMIM:600921
A:Map position: 13q11-13q12
C:Superfamily: fibroblast growth factor

Query Match 15.7%; Score 172; DB 2; Length 208;
Best Local Similarity 35.2%; Pred. No. 6.8e-08;
Matches 51; Conservative 22; Mismatches 60; Indels 12; Gaps 6;

QY 52 LRLYLYSRTSGKHIOVL-GRRISARGEDGKYAQLLVETDFGSOVRKIKGKETEFYLCM 110
Db 61 LRRQLYCRT-GRHLEIFPNNGTIOGTRKDHRSRGILEFISIAVG-LVSIKGVDSGLYLGM 118
QY 111 NRKGLVKGPDGTSKSCVFTEKVLNNYALMSAKYS-----GWYVGFKKGRPRKGP 164
Db 119 NEKGELYS-EKLTQECVFEQEEWNYTSSNLKHKVDTGRRYYVALNKDGTTPRGTR 177
QY 165 TRNQDQVHPMKR--YPKGOPELQK 187
Db 178 TKRHQKFTFLPRPDPDKVPPELYK 202

RESULT 13

S04147
acidic fibroblast growth factor 1 - rat
N:Alternate names: heparin-binding growth factor 1
C:Species: Rattus norvegicus (Norway rat)
C:Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 16-Jul-1999
C:Accession: S04147
R: Goodrich, S.P.; Van, G.C.; Bahrenburg, K.; Mansson, P.E.
Nucleic Acids Res. 17, 2867, 1989
A:Title: The nucleotide sequence of rat heparin binding growth factor 1 (HBGF-1).
A:Reference number: S04147; MUID:89240051; PMID:2470029
A:Accession: S04147
A:Molecule type: mRNA
A:Residues: 1-155 <GOO>
A:Cross-references: EMBL:X14232; NID:g56351; PIDN:CAA32448.1; PID:g56352
C:Superfamily: fibroblast growth factor
C:Keywords: growth factor; heparin binding

Query Match 15.6%; Score 171.5; DB 2; Length 155;
Best Local Similarity 32.0%; Pred. No. 5.4e-08;
Matches 39; Conservative 29; Mismatches 49; Indels 5; Gaps 4;

QY 57 LYSRTSGKHIOVL-GRRISARGEDGKYAQLLVETDFGSOVRKIKGKETEFYLCMNRKG 115
Db 29 LYSNGGHFLRILPDGTVDGTRDRSDQHILQLSAESAG-EVYIKGTETGQYLAMDTGL 87
QY 116 LVKPGDGTSCKEVFIKVLNNYALMSAKYS--GWTVGFTKKGRPRKGPKTRENQDQVH 173
Db 88 LYGS-QTPNEECLFLERLEENHYNTYSKKHAENWVGLKNGSKCRGRPRTHYGOKAIL 146
QY 174 FM 175
Db 147 FL 148

RESULT 14

D37360
acidic fibroblast growth factor - mouse
N:Alternate names: aFGF; FGF-1
C:Species: Mus musculus (house mouse)
C:Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 16-Jul-1999
C:Accession: D37360; JC5231
R: Hebert, J.M.; Basillio, C.; Goldfarb, M.; Haub, O.; Martin, G.R.
Dev. Biol. 138, 454-463, 1990
A:Title: Isolation of cDNAs encoding four mouse FGF family members and characterization of their promoters
A:Reference number: A37360; MUID:90201563; PMID:2318343
A:Accession: D37360
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-155 <HEB>
A:Cross-references: GB:M30641; NID:g193284; PIDN:AAA37618.1; PID:g309236
R: Madhail, F.; Hackshaw, K.V.; Chiu, I.M.
Gene 179, 231-236, 1996
A:Title: Cloning and characterization of the mouse Fgf-1 gene.
A:Reference number: JC5231; MUID:97128312; PMID:8972905
A:Accession: JC5231
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-155 <MAD>
A:Cross-references: GB:U36456
C:Comment: This protein is an inducer of neovascularization in angiogenic disease in C:Genetics:
A:Gene: Fgf-1
A:Introns: 57/1; 91/3
C:Superfamily: fibroblast growth factor

Query Match 15.6%; Score 171.5; DB 2; Length 155;
Best Local Similarity 32.0%; Pred. No. 5.4e-08;
Matches 39; Conservative 29; Mismatches 49; Indels 5; Gaps 4;

QY 57 LYSRTSGKHIOVL-GRRISARGEDGKYAQLLVETDFGSOVRKIKGKETEFYLCMNRKG 115
Db 29 LYSNGGHFLRILPDGTVDGTRDRSDQHILQLSAESAG-EVYIKGTETGQYLAMDTGL 87
QY 116 LVKPGDGTSCKEVFIKVLNNYALMSAKYS--GWTVGFTKKGRPRKGPKTRENQDQVH 173
Db 88 LYGS-QTPNEECLFLERLEENHYNTYSKKHAENWVGLKNGSKCRGRPRTHYGOKAIL 146
QY 174 FM 175
Db 147 FL 148

RESULT 15

TVH0HS
fibroblast growth factor 4 - human
N:Alternate names: heparin secretory transforming protein 1; Kaposi sarcoma oncogene C:Species: Homo sapiens (man)
C:Date: 31-Mar-1989 #sequence_revision 31-Mar-1989 #text_change 18-Jun-1999
C:Accession: A28417; A29876; A29649
R: Yoshida, T.; Miyagawa, K.; Odagiri, H.; Sakamoto, H.; Little, P.F.R.; Terada, M.; S: Proc. Natl. Acad. Sci. U.S.A. 84, 7305-7309, 1987
A:Title: Genomic sequence of hst, a transforming gene encoding a protein homologous to A:Reference number: A28417; MUID:88041096; PMID:2959599

Search completed: April 27, 2003, 15:01:21
Job time : 29 secs